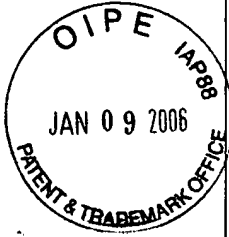


10/ 069207

C of C

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



APPLN. OF: OGAWA et al.  
PATENT NO: 6,881,332  
ISSUED: April 19, 2005  
FOR: SEWAGE TREATMENT APPARATUS  
GROUP: 1724 CONFIRMATION NO.: 7677  
EXAMINER: THEISEN, DOUGLAS J. DOCKET: SHIG C10601EC

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Certificate**  
JAN 13 2006  
**of Correction**

**PETITION FOR CERTIFICATE OF CORRECTION**

Dear Sirs:

Ogawa et al., the Patentees of the above-identified patent, through their attorney, hereby petition for issuance of a Certificate of Correction in the above identified patent. A Certificate of Correction (PTO form 1050) is enclosed, in duplicate. The Certificate of Correction is required to correct a significant printing errors occurring in the abstract and the claims as follows:

Claim 1, Col. 6, line 66, "crushed" should be --ground--.

Claim 1, Col 6, line 67, "separation means therein" should be --separation device--.

Claim 1, Col. 7, line 5, "stirring means" should be--a stirrer--.

Claim 1, Col. 7, line 6, delete the word "and".

Claim 1, Col. 7, insert "a bottom plate of the decomposing treatment tank, the bottom plate having a plurality of holes; and" after line 6.

Claim 1, Col. 7, line 11, "the air holes" should be --the holes--.

HAYES SOLOWAY P.C.  
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MANCHESTER, NH 03101  
TEL. 603.668.1400  
FAX. 603.668.8567

JAN 13 2006

Claim 2, Col. 7, line 13, "means" should be --device--.

Claim 2, Col. 7, line 18, "cover the" should be --cover an--.

Claim 2, Col. 7, line 21, "the width" should be --a width--.

Claim 3, Col. 8, line 6, "spray means" should be --sprayer--.

Claim 3, Col. 8, line 6, "disposed to" should be --disposed in--.

Claim 3, Col. 8, line 7, "separation" should be --decomposing--.

Claim 4, Col. 8, line 11, "separation" should be --decomposing--.

Claim 5, Col. 8, line 14, "decomposition" should be --decomposing--.

Claim 7, Col. 8, line 19, "claim 1" should be --claim 4--.

Claim 7, Col. 8, line 20, "wherein the exhaust gas from the separation treatment tank" should be --wherein gas generated in the decomposing treatment tank--.

In the abstract, line 1, "In the present invention, solid contents 38" should be --A sewage treatment apparatus in which solid contents--.

In the abstract, line 2, "device 33 in" should be --device in--.

In the abstract, line 3, "tank 14 and" should be --tank and--.

In the abstract, line "tank 11, are" should be --tank, are--.

In the abstract, line 6, delete the words "12 and substantially disappear".

In the abstract, line 8, "separation tank 13" should be --separation tank--.

Since the errors were Patent Office errors, it is believed that the Certificate of Correction should be issued without charge to the Applicant. A correct copy of the Claims and the Abstract appear in Amendment A and/or the Examiner's Amendment attached to the Notice of Allowance dated October, 29, 2003. A copy of Amendment A and a copy of the Examiner's Amendment are being provided for convenience of the PTO.

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JAN 13 2006

Respectfully submitted,



Norman P. Soloway  
Attorney for Applicants  
Reg. No. 24,315

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents P.O. Box 1450, Alexandria, VA 22313-1450, on January 5, 2006 at Tucson, Arizona.

By: 

HAYES SOLOWAY P.C.  
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JAN 13 2006

# UNITED STATES PATENT AND TRADEMARK OFFICE

## CERTIFICATE OF CORRECTION

PATENT NO. : 6,881,332

DATED : April 19, 2005

INVENTOR(S) : OGAWA et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

- Claim 1, Col. 6, line 66, "crushed" should be --ground--.
- Claim 1, Col. 6, line 67, "separation means therein" should be --separation device--.
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- Claim 1, Col. 7, line 11, "the air holes" should be --the holes--.
- Claim 2, Col. 7, line 13, "means" should be --device--.
- Claim 2, Col. 7, line 18, "cover the" should be --cover an--.
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- In the abstract, line 1, "In the present invention, solid contents 38" should be --A sewage treatment apparatus in which solid contents--.
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- In the abstract, line "tank 11, are" should be --tank, are--.
- In the abstract, line 6, delete the words "12 and substantially disappear".
- In the abstract, line 8, "separation tank 13" should be --separation tank--.

MAILING ADDRESS OF SENDER (Please do not use customer number)

Norman P. Soloway  
 HAYES SOLOWAY P.C.  
 3450 E. Sunrise Drive, Suite 140  
 Tucson, AZ 85718

PATENT NO. 6,881,332

No. of additional copies



JAN 13 2006

# UNITED STATES PATENT AND TRADEMARK OFFICE

## CERTIFICATE OF CORRECTION

PATENT NO. : 6,881,332

DATED : April 19, 2005

INVENTOR(S) : OGAWA et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

- Claim 1, Col. 6, line 66, "crushed" should be --ground--.
- Claim 1, Col. 6, line 67, "separation means therein" should be --separation device--.
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- In the abstract, line 6, delete the words "12 and substantially disappear".
- In the abstract, line 8, "separation tank 13" should be --separation tank--.

MAILING ADDRESS OF SENDER (Please do not use customer number

Norman P. Soloway  
HAYES SOLOWAY P.C.  
3450 E. Sunrise Drive, Suite 140  
Tucson, AZ 85718

PATENT NO. 6,881,332

No. of additional copies



**JAN 13 2006**



## UNITED STATES PATENT AND TRADEMARK OFFICE



**COPY**  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

## NOTICE OF ALLOWANCE AND FEE(S) DUE

Hayes Soloway  
130 West Cushing Street  
Tucson, AZ 85701

10/29/2003

RECEIVED

NOV 03 2003

HAYES SOLOWAY

EXAMINER

THEISEN, DOUGLAS J

ART UNIT

PAPER NUMBER

1724

DATE MAILED: 10/29/2003

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,207	02/21/2002	Hiroshi Ogawa	SHIG C10601EC	7677
TITLE OF INVENTION: SEWAGE TREATMENT APPARATUS ✓				

11/29/03  
12/29/03  
1/29/04 dkt.

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$665	\$0	\$665	01/29/2004

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

## HOW TO REPLY TO THIS NOTICE:

## I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status is changed, pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above and notify the United States Patent and Trademark Office of the change in status, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check the box below and enclose the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.

☐ Applicant claims SMALL ENTITY status.  
See 37 CFR 1.27.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

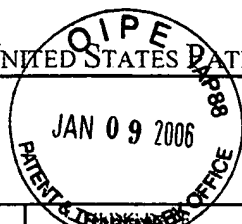
III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

JAN 13 2006



## UNITED STATES PATENT AND TRADEMARK OFFICE



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Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,207	Hiroshi Ogawa	SHIG C10601EC	7677

7590 10/29/2003

Hayes Soloway  
130 West Cushing Street  
Tucson, AZ 85701

EXAMINER

THEISEN, DOUGLAS J

ART UNIT PAPER NUMBER

1724

DATE MAILED: 10/29/2003

### Notice of Fee Increase on October 1, 2003

If a reply to a "Notice of Allowance and Fee(s) Due" is filed in the Office on or after October 1, 2003, then the amount due will be higher than that set forth in the "Notice of Allowance and Fee(s) Due" since there will be an increase in fees effective on October 1, 2003. See Revision of Patent Fees for Fiscal Year 2004; Final Rule, 68 Fed. Reg. 41532, 41533, 41534 (July 14, 2003).

The current fee schedule is accessible from (<http://www.uspto.gov/main/howtofees.htm>).

If the fee paid is the amount shown on the "Notice of Allowance and Fee(s) Due" but not the correct amount in view of the fee increase, a "Notice of Pay Balance of Issue Fee" will be mailed to applicant. In order to avoid processing delays associated with mailing of a "Notice of Pay Balance of Issue Fee," if the response to the Notice of Allowance is to be filed on or after October 1, 2003 (or mailed with a certificate of mailing on or after October 1, 2003), the issue fee paid should be the fee that is required at the time the fee is paid. If the issue fee was previously paid, and the response to the "Notice of Allowance and Fee(s) Due" includes a request to apply a previously-paid issue fee to the issue fee now due, then the difference between the issue fee amount at the time the response is filed and the previously-paid issue fee should be paid. See Manual of Patent Examining Procedure, Section 1308.01 (Eighth Edition, August 2001).

Effective October 1, 2003, 37 CFR 1.18 is amended by revising paragraphs (a) through (c) to read as set forth below.

Section 1.18 Patent post allowance (including issue) fees.

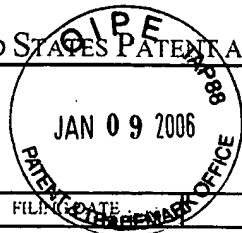
- (a) Issue fee for issuing each original or reissue patent, except a design or plant patent:
- By a small entity (Sec. 1.27(a))..... \$665.00
  - By other than a small entity..... \$1,330.00
- (b) Issue fee for issuing a design patent:
- By a small entity (Sec. 1.27(a))..... \$240.00
  - By other than a small entity..... \$480.00
- (c) Issue fee for issuing a plant patent:
- By a small entity (Sec. 1.27(a))..... \$320.00
  - By other than a small entity..... \$640.00

Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

JAN 13 2006



UNITED STATES PATENT AND TRADEMARK OFFICE



UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,207	02/21/2002	Hiroshi Ogawa	SHIG C10601EC	7677

7590

10/29/2003

Hayes Soloway  
130 West Cushing Street  
Tucson, AZ 85701

EXAMINER

THEISEN, DOUGLAS J

ART UNIT PAPER NUMBER

1724

DATE MAILED: 10/29/2003

**Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)**  
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 86 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 86 day(s).

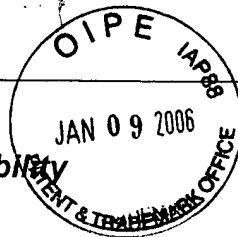
If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) system (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (703) 305-1383. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

JAN 13 2006





# **Notice of Allowability**

Application No.

10/069,207

Examiner

Douglas J. Theisen

Applicant(s)

OGAWA ET AL.

Art Unit

1724

## **-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment A filed on 18 September 2003.
2. ☒ The allowed claim(s) is/are 1-7. ✓
3. ☒ The drawings filed on 18 September 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No. \_\_\_\_\_.
  - (b) ☐ including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

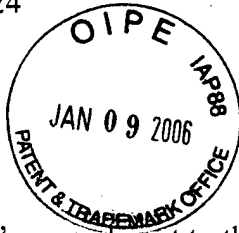
9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## **Attachment(s)**

- |  |   |
|--|---|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892)  | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)          |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 4 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____             |
| 5 <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____               | 6 <input checked="" type="checkbox"/> Examiner's Amendment/Comment                  |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
|  | 9 <input type="checkbox"/> Other  |

JAN 13 2006

Art Unit: 1724



# EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Nick Soloway on 22 October 2003.

The application has been amended as follows:

## IN THE SPECIFICATION:

In the paragraph beginning at page 9, line 7 as amended in Amendment A the spelling of "hoes" in line 3 of the amended paragraph has been changed to "holes".

## IN THE CLAIMS:

In claim 1 as currently amended in Amendment A lines 9 and 10, which currently read "a bottom plate having a plurality of holes disposed under the decomposing treatment tank; and" have been changed to "a bottom plate of the decomposing treatment tank, the bottom plate having a plurality of holes; and".

The following is an examiner's statement of reasons for allowance: The reason for allowance is that the prior art does not show applicant's features of a sewage treatment apparatus comprising a solid-liquid separation tank for receiving sewage containing ground solid contents and collecting the solid contents by solid-liquid separation device; a decomposing treatment tank

JAN 13 2006

Art Unit: 1724

disposed under the solid-liquid separation tank for receiving the collected solid contents and decomposing the solid contents by aerobic microbes; a stirrer for the solid contents disposed in the decomposing treatment tank; a bottom plate of the decomposing treatment tank, the bottom plate having a plurality of holes; and an aeration tank disposed under the bottom plate which has a plurality of air holes, in the decomposing treatment tank for supplying air or oxygen bubbling in stored water into the decomposing treatment tank through the holes of the bottom plate.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas J. Theisen whose telephone number is 703-305-6499. The examiner can normally be reached on Monday, Tuesday, and Wednesday 6:30 until 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on 703-308-1261. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

\*\*\*

October 22, 2003

  
BLAINE COPENHEAVER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700

JAN 13 2006



COPY

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. Of: OGAWA et al.

Serial No.: 10/069,207

Filed: February 21, 2002

For: SEWAGE TREATMENT APPARATUS

Group: 1724

Examiner: Douglas J. Theisen

DOCKET: SHIG C10601 EC

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**AMENDMENT A**

Dear Sir:

This Amendment is being filed in response to the Official Action mailed July 16, 2003.

Please amend the Application as follows:

**Amendments to the Specification** begin on page 2 of this Amendment.

**Amendments to the Claims** begin on page 7 of this Amendment.

**Amendments to the Abstract** begin on page 9 of this Amendment.

**Amendments to the Drawings** begin on page 10 of this Amendment, and include an attached replacement sheet.

**Remarks/Arguments** begin on page 11 of this Amendment.

DAYES SOLOWAY P.C.  
130 W. CUSHING ST.  
TUCSON, AZ 85701  
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FAX. 520.882.7643

175 CANAL STREET  
MANCHESTER, NH 03101  
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FAX. 603.668.8567

JAN 13 2006

**AMENDMENTS TO THE SPECIFICATION:**

Please amend the paragraph beginning at page 1, line 6, as follows:

The present invention relates to a sewage treatment apparatus for effectively treating waste water discharged from collective housing such as mansions, hotels, restaurants, hospitals, housing complexes, food factories, and the like, in particular, sewage containing solid materials such as kitchen garbage, and the like that are ~~crushed with disposers~~ ground by a disposer and discharged.

Please amend the paragraph beginning at page 1, line 15, as follows:

Recently, kitchen garbage, and the like generated in the mansions, and so on as described above are ~~crushed with disposers~~ ground by a disposer and discharged together with waste water. Thus, the amount of sludge generated tends to increase, and a problem arises in a method of treating the sludge.

Please amend the paragraph beginning at page 2, line 21, as follows:

The treatment system arranged as described above yet has the following problem. Since the solid contents contained in all the sludge containing sewage in the storage tank 03 is separated from liquid contents using the dehydrator 05, the solid contents are generated in a large amount. Thus, a long time is necessary to make the solid contents ~~to the~~ into compost in the fermenting tank 06 as well as it is time-consuming to handle and post treat the compost, and a recycling cost is also expensive. Further, since the discharge water the solid contents of which are separated from the liquid contents and which contains the oil contents, is supplied to the oil-water separation tank or the public sewer, a large load is applied thereon. Further, since the dehydrator 05, the fermenting tank 06, and the oil-water separation tank 08 are independently

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installed, respectively, the size of a treatment apparatus is increased as a whole, and a large installation space is required.

Please amend the paragraph beginning at page 9, line 7, as follows:

A water spray pipe 25 is disposed in the decomposing treatment tank 11 at a portion near to the upper side thereof so as to face in a right and left direction. Water is sprayed in a shower state from the plurality of outlet holes 26 defined through the lower end of the water spray pipe 25.

~~Water is sprayed in a shower state from the plurality of ejection holes 26 defined through the lower end of the water spray pipe 25.~~

Please amend the paragraph beginning at page 9, line 18, as follows:

That is, water is stored in the aeration tank 12 and bubbled by the air supplied from the blow-out holes 28, and the bubbles ~~are flown~~ flow into the decomposing treatment tank 11 through the air holes 16 of the bottom plate 15 so as to supply air (oxygen) into the decomposing treatment tank 11.

Please amend the paragraph beginning at page 11, line 2, as follows:

A known endless rotationally traveling type solid-liquid separation device 33 as disclosed in, for example, Japanese patent No. 2719869 is disposed in a sewage tank 32 installed in the solid-liquid separation tank 14 ~~in a tilt state~~ at an angle. ~~Further.~~ Further, a drain pipe 40 is disposed in the solid-liquid separation tank 14 to discharge the sewage into the oil-water separation tank 13 and the public sewage treatment facility 9.

Please amend the paragraph beginning at page 11, line 9, as follows:

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The solid-liquid separation device 33 is composed a conveyer belt 35, which is trained around a pair of rollers 34 ~~and 34~~ rotatably supported at the upper and lower portions of a conveyer frame (not shown), and a comb-shaped sieve plate 36, which is secured to the conveyer frame so as to cover the upper surface of the conveyer belt 35. The comb-shaped sieve plate 36 is composed of a multiplicity of round rods or squire rods disposed longitudinally at ~~minute~~ small intervals in a width direction. A multiplicity of transportation projections 37, which are slidably engaged between the respective rods of the comb-shaped sieve plate 36 and project upward, are disposed on the surface of the conveyer belt 35 at predetermined intervals.

Please amend the paragraph beginning at page 14, line 17, as follows:

The oil contents contained in the sewage, which ~~has flown~~ flow into the oil-water separation tank 13, are removed while the sewage overflows the respective partition walls 29 and flows leftward, and then discharged into the public sewage treatment facility 9 from the discharge pipe 8.

Please amend the paragraph beginning at page 14, line 22, as follows:

As described above, in the sewage treatment apparatus of the embodiment, sewage containing solid contents, which have been ~~crushed with~~ ground by a disposer, is directly fed into the sewage tank 32 of the solid-liquid separation tank 14 by the pump 6, the solid contents in the sewage are collected by the solid-liquid separation device 33 installed in the sewage treatment tank 32, and the solid contents 38 are charged into the decomposing treatment tank 11 and decomposed into water and CO<sub>2</sub>. Accordingly, compost and the like, which are conventionally generated, are not almost generated, and thereby a cost required in post treatment and recycle can be greatly reduced.

Please amend the paragraph beginning on page 15, line 21 as follows:

Reference Numerals

- 1 — collective housing
- 2 — disposer
- 3 — sewage pipe
- 4 — collective sewage pipe
- 5 — water tank
- 6 — pump
- 7 — sewage treatment apparatus
- 8 — discharge pipe
- 9 — sewage treatment facility
- 10 — river
- 11 — decomposing treatment tank
- 12 — aeration tank
- 13 — oil water separation tank
- 14 — solid liquid separation tank
- 15 — bottom plate
- 16 — air hole
- 17 — stirring device
- 18 — rotating shaft
- 19 — stirring rod
- 20 — stirring blade

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- 21 — pulley
- 22 — belt
- 23 — geared motor
- 24 — drive pulley
- 25 — water spray pipe (water spray means)
- 26 — ejection hole
- 27 — air supply pipe
- 28 — blow out hole
- 29 — partition wall
- 30 — passing through hole
- 31 — exhaust pipe
- 32 — sewage tank
- 33 — solid liquid separation device
- 34 — roller
- 35 — conveyer belt
- 36 — comb shaped sieve plate
- 37 — transportation projection
- 38 — solid content
- 39 — step section
- 40 — discharge pipe

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**AMENDMENTS TO THE CLAIMS:**

Kindly amend claims 1-5 and 7, as shown below.

This listing of claims will replace all prior versions and listings of claims in the  
Application:

**Claim 1 (currently amended):** A sewage treatment apparatus, comprising:

a solid-liquid separation tank for receiving sewage containing ~~crushed~~ ground solid  
contents and collecting the solid contents by ~~solid-liquid-separation means therein~~ separation  
device;

a decomposing treatment tank disposed under the solid-liquid separation tank for  
receiving the collected solid contents and decomposing the solid contents by aerobic microbes;

~~stirring means~~ a stirrer for the solid contents disposed in the decomposing treatment tank;  
and

a bottom plate having a plurality of holes disposed under the decomposing treatment  
tank; and

an aeration tank disposed under the bottom plate which has a plurality of air holes, in the  
decomposing treatment tank for supplying air or oxygen bubbling in stored water into the  
decomposing treatment tank through the ~~air~~ holes of the bottom plate.

**Claim 2 (currently amended):** A sewage treatment apparatus according to claim 1, wherein  
the solid-liquid ~~separation means~~ separation device is an endless rotationally traveling type solid-  
liquid separation device that comprises:

a conveyer belt endlessly rotationally traveling in an obliquely up and down direction;

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a comb-shaped sieve plate disposed so as to cover ~~the~~ an upper surface of the conveyor belt and composed of a multiplicity of rod-shaped members disposed longitudinally at minute intervals in a ~~the~~ width direction of the belt; and

a multiplicity of transportation projections projecting on the upper surface of the conveyor belt at predetermined intervals and sliding between the respective rod-shaped members of the comb-shaped sieve plate.

**Claim 3 (currently amended):** A sewage treatment apparatus according to claim 2, wherein a water ~~spray means sprayer~~ is disposed ~~to~~ in an upper portion in the decomposing separation treatment tank.

**Claim 4 (currently amended):** A sewage treatment apparatus according to claim 3, wherein an oil-water separation tank that communicates with a lower portion of the aeration tank is disposed on a side adjacent to the ~~separation~~ decomposing treatment tank.

**Claims 5 (currently amended):** A sewage treatment apparatus according to claim 1, wherein the water level in the aeration tank is set higher than the bottom plate of the ~~decomposition~~ decomposing treatment tank.

**Claim 6 (original):** A sewage treatment apparatus according to claim 4, wherein at least a part of the sewage, from which solid contents have been removed in the solid-liquid separation device, is discharged into the oil-water separation tank.

**Claim 7 (currently amended):** A sewage treatment apparatus according to claim ~~4~~ 4, wherein ~~the exhaust gas generated in from the separation~~ the exhaust gas generated in from the separation decomposing treatment tank ~~is flown~~ flows into the oil-water separation tank or into air feed pipes to the aeration tank.

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**AMENDMENTS TO THE ABSTRACT:**

Please amend the abstract as follows:

~~In the present invention,~~ A sewage treatment apparatus in which solid contents 38, which are collected by a solid-liquid separation device 33 in a solid-liquid separation tank 14 and charged into a decomposing treatment tank 11, are decomposed to water and CO<sub>2</sub> by the action of aerobic microbes and the air (oxygen) supplied from a lower aeration tank 12 ~~and substantially disappear~~. The oil contents contained in the water having been decomposed is removed by an oil-water separation tank 13.

~~Reference: FIG. 2~~

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**AMENDMENTS TO THE DRAWINGS:**

The attached sheet of drawings includes changes to FIG. 4. This sheet, which includes FIG. 4 only, replaces the original sheet including FIG. 4.

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REMARKS

Figure 4 of the drawings has been amended to include the legend "Prior Art" as required by the Examiner. A drawing replacement sheet is enclosed.

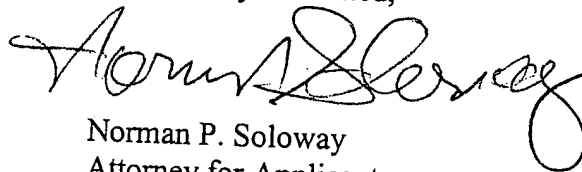
The specification has been amended to address the informalities noted by the Examiner, and also to employ more idiomatic English. No new matter has been entered.

The claims have been amended to address the 112 rejections and language objections noted by the Examiner. Additionally, the claims have been amended to eliminate "means" language.

It is noted, no art has been applied. Accordingly, it is believed the application now is in order for allowance. However, should the Examiner consider any further changes necessary, the Examiner is respectfully requested to telephone the undersigned attorney.

In the event there are any fee deficiencies or additional fees are payable, please charge them (or credit any overpayment) to our Deposit Account Number 08-1391.

Respectfully submitted,



Norman P. Soloway  
Attorney for Applicant  
Reg. No. 24,315

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on September 18, 2003, at Tucson, Arizona.

By 

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